

Session & Panel Descriptions

8:10 a.m.

Wednesday - January 14th, 2015



FRANK MACHER —
Chairman/CEO, *Continental Structural Plastics*

SESSION: THE EVOLUTION OF AUTOMOTIVE PLASTICS: A VISION FOR TODAY AND BEYOND

For more than 30 years, integrating plastics has been key to the automotive industry's ability to design high-performance vehicles with improved safety features and fuel economy. Just since 2008—not coincidentally the year the global economy bottomed out—the average vehicle weight has dropped 20 percent, thanks in large part to plastics. This weight-loss translates into a similar reduction in per-vehicle emissions.

And plastics are here to stay, both as a substitution for metal, and in hybrid solutions, where composites are bonded to aluminum or steel.

Frank Macher was instrumental in some of the first uses of plastics in the auto industry, and he will share a vision of the role plastics and composites will play in the industry today and beyond. In his remarks, he'll address how the industry has evolved, how materials are changing, and where he sees it all going next.

8:55 a.m.



ELLEN LEE —
Team Leader, Plastics Research, *Ford Motor Co.*

SESSION: RESEARCH INTO AUTOMOTIVE COMPOSITES AND PROSPECTS FOR THE FUTURE

Cellulose Reinforced Polypropylene has been used on Ford Motor Company prototype vehicles in the past, but its use on the 2014 Lincoln MKX marks its first application on a production vehicle. Ellen Lee of Ford Motor Co. will lead a discussion into the use of new composite materials that are on the drawing board for today and in the future and discuss recent developments with industry partners.

The use of composites technology could represent breakthrough applications for plastics, and today's work represents just some of the possibilities for new materials and applications.

9:30 a.m.



PAUL BLANCHARD—
Director, Engineering Plastics, *IHS Chemicals*

SESSION: A FORECAST FOR KEY PLASTIC RESINS AND THE FUTURE VEHICLE

IHS Chemicals is one of the automotive market's leading consulting firms on material developments. Paul Blanchard, director of engineering plastics for IHS will provide insights in polypropylene and nylon resins, two of the largest volume plastic materials in automotive parts production (together, they make up about 35 percent of the weight of plastics in the average light vehicle in North America).

Both polypropylene and nylon are affected by the continuing shale energy developments in the U.S. market and have a role to play in weight reductions inspired by future fuel efficiency standards. Paul Blanchard will examine the evolving cost and supply/demand for these resins and implications for future pricing.

10:20 a.m.



SANDY MUNRO—
President, *Munro & Associates*

**SESSION: DECONSTRUCTING THE BMW i3:
GROUNDBREAKING TECHNOLOGY AND THE COMPOSITE CAR**

The use of composite materials for much of the BMW i3 offers a pioneering use of plastics that is certain to influence the next generation of vehicles. Munro & Associates is tearing down, reverse engineering and performing a bottoms up costing analysis of this vehicle and is preparing a detailed brief that will be distributed globally. Sandy Munro, president of Munro & Associates, will present some of the findings and lead a discussion of how this vehicle will dominate discussion of the use of plastics for years to come.

10:55 a.m.



WILLIAM HARNEY
Global Product Line Director, Magna Interiors and Exteriors

SESSION: BMW i3 LIFTGATE: THE MODULAR, COMPOSITE SOLUTION

Magna has leveraged its expertise in advanced composites and lightweight exterior systems to produce an innovative liftgate assembly for the BMW i3. The collaboratively designed liftgate achieves the brand appearance and vehicle mass requirements through the use of a composite structure that integrates the liftgate's functional systems and is delivered to the assembly plant as a completely assembled, ready-for-installation module. The i3 liftgate serves as "exhibit A" of what Magna can deliver as a Tier 1 supplier with the ability to generate lightweight, low-cost systems for global automakers.

11:15 a.m.



SUZANNE COLE
President, Miller Cole LLC

**SESSION: CAFE STANDARDS: HOW WILL REGULATIONS AFFECT
FUTURE VEHICLE DEVELOPMENT AND LIGHTWEIGHTING**

Suzanne Cole leads automotive lightweighting efforts with federal agencies for the American Chemistry Council (ACC) and is intimately familiar with the progress of legislation in Washington and in state legislatures. She and others will discuss how the continued implementation of CAFÉ standards will affect future vehicle development, the role of plastics, and the changes in how the auto industry must manufacture and sell vehicles.

1 p.m.



AUSTEN ANGELL
CEO, Modern Edge, Board Chairman, Industrial Designers Society of America (IDSA)

SESSION: TRENDS IN FUTURE VEHICLE DESIGN AND THE ROLE OF PLASTICS

Outstanding vehicle development starts with outstanding design work. Austen Angell of Modern Edge has worked with many top automakers on future vehicles and has also offered assistance on the next wave of autonomous vehicles. He will outline some of the key trends in self-driving vehicles and other design innovations that could influence future automobile production.

1:30 p.m.



DAVID MUYRES

Director, Global Innovation Center, *Johnson Controls Inc.*

SESSION: THE NEXT GENERATION OF AUTONOMOUS VEHICLES

Johnson Controls Inc. is showcasing new development in seat and interior production that will closely tie to the emergence of autonomous vehicles and the role of plastics in future development. David Muyres of JCI will explore how the use of self-driving vehicles will affect vehicle manufacturing and lead to further innovations that will provide opportunity for the plastics industry.

2 p.m.



JEFF STERNBERG

Global Automotive Technology Director, *DuPont*

SESSION: THE ROLE OF PLASTICS MATERIALS TO HELP ENABLE THE CAR OF THE FUTURE

Automakers are looking at many technologies to meet emissions and fuel economy challenges. At the top of the list, though, is lightweighting, according to a recent study primarily of the automotive design and engineering community in the U.S. with Wards. However, the automotive design and engineering community is ambivalent about the current materials' ability to help them meet the new regulations.

Jeff Sternberg of DuPont will look at the role of plastics in developing the car of the future. DuPont's global automotive technology director will discuss lightweighting and other areas that could help plastics truly replace metal in frontier applications, such as exhaust and engine blocks. He will challenge preconceived notions about plastics, showing new ways to get the most performance from plastics through creative approaches to design and processing.

3 p.m.

MATERIALS INNOVATIONS PANEL

With material science playing a key role in the future vehicle, this session will target several companies offering novel solutions to vehicle development involving plastic material processes. Learn how present and future materials will affect vehicle production.

Session Leader:



SANDRA MCCLELLAND

Vice Chairman, American Chemistry Council Automotive Plastics

Panelists:



BRUCE MULHOLLAND

Color Technology Manager, Celanese Corp.

TOPIC: THE ELIMINATION OF PAINT IN THE VEHICLE INTERIOR



BRIAN BALENO

Global Automotive Business Manager, Solvay Specialty Polymers

TOPIC: HIGH PERFORMANCE POLYMERS: REDUCING CO2 EMISSIONS BY IMPROVING POWERTRAIN EFFICIENCY



JOHN SAXON

President/CEO, DLH Industries

TOPIC: ENGINEERED PLASTICS AND TUBING SYSTEMS



SHAWN MEALEY

Senior AETS Specialist, Dow Corning

TOPIC: SILICON-BASED TECHNOLOGIES IN AUTOMOTIVE APPLICATIONS

3:40 p.m.



MATTHEW MARKS

Chairman, American Chemistry Council Automotive Plastics

SESSION: A ROADMAP FOR THE FUTURE OF AUTOMOTIVE PLASTICS

Matthew Marks of SABIC also serves as chairman of the American Chemistry Council's Automotive Plastics Division. He will explore the implementation of ACC's technology roadmap and offer solutions for developing multi-material joining solutions, while presenting the establishment of the Advanced Composites Manufacturing Institute and Consortium. Learn about new modeling and predictive engineering tools with a focus on future R&D projects.

4:05 p.m.

Automotive Components Innovations Panel

This panel discussion will feature insights and innovations from several automotive suppliers, each of whom will present a short discussion of their technologies to be followed by questions. Understand how these suppliers are using innovation and technology development to drive improved vehicles.

Session Leader:



KERRI JANSEN

Senior Reporter, Plastics News

Panelists:



STEVE BRAIG

President & CEO, Trexel, Inc.

**TOPIC: INNOVATIVE PROCESSING SOLUTIONS
FOR ENHANCED AUTOMOTIVE INTERIOR PARTS**

4:05 p.m.



ROSE RYNTZ

Senior Director, Advanced Engineering & Material Development, IAC

TOPIC: PLASTICS AS AN ENABLER FOR THE FUTURE OF AUTOMOTIVE



GIORGIO SANTELLA

Chief Marketing Officer, Piovan

TOPIC: NEW RESIN BLENDING, DRYING AND CONVEYING SYSTEMS FOR BMW



ANDY STECHER

President/CEO North America, Plasmatec

TOPIC: AUTOMOTIVE SURFACES AND THE PROSPECTS OF PLASMA COATING

4:50 p.m.



MOHAMMED USMAN

Global Manager/Technical Leader PTI, Ford Motor Co.

SESSION: METAL TO PLASTICS: THE CONVERSION PLASTIC FUEL TANKS AT FORD MOTOR CO.

Automotive companies have been actively converting existing metal products or parts to plastic, driven by design flexibility, the need to reduce weight and improve fuel efficiency. They face challenges in optimizing designs when changing materials from metal to plastics or from the use of expensive plastics material such as nylon to polypropylene in automotive powertrain underwood high temperature applications. This session will discuss how meet these performance requirements while changing to plastics material.